



Department of Energy

ROCKY FLATS PROJECT OFFICE
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FEB 16 2006

06-DOE-00021

Mr. Carl Spreng
Rocky Flats Cleanup Agreement Project Coordinator
Colorado Department of Public Health and Environment
4300 Cherry Creek Drive South
Denver, Colorado 80246-1530

Mr. Mark Aguilar
Rocky Flats Cleanup Agreement Team Lead
U.S. Environmental Protection Agency, Region VIII
999 18th Street, Suite 300
Denver, Colorado 80202-2405

Dear Gentlemen:

Enclosed please find page changes comprising minor modifications to the *Final Interim Measure/Interim Remedial Action for the Original Landfill (IM/IRA)*, originally dated March 10, 2005. These page changes reflect the deletion of the Original Landfill-specific wetland mitigation plan from the document, in favor of a sitewide wetland plan to be implemented by the U.S. Department of Energy, Office of Legacy Management. The other substantive change to the IM/IRA is the addition of mercury and semi-volatile organic compounds to the groundwater monitoring regime discussed in Appendix B of the IM/IRA. The changed text appears in red on the enclosed pages.

Per the provisions of the Rocky Flats Cleanup Agreement, we request your agencies' approval of these minor modifications.

If you have any questions, please call me at (303) 966-6246, and thank you for your assistance in this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "John J. Rampe", is written over the typed name and title.

John J. Rampe, Director
Rocky Flats Closure Project Management

Enclosure

ADMIN RECORD

IA-A-002860

1/2

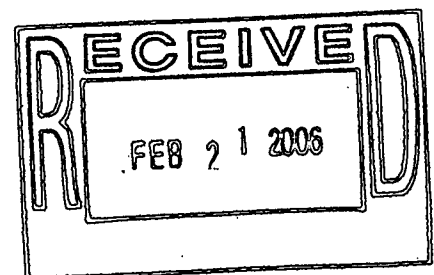
Mr. Carl Spreng
Mr. Mark Aguilar
06-DOE-00021

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FEB 16 2006

cc w/Encl.:

K. Korkia, RFCAB
D. Abelson, RFCLOG
A. Nelson, City of Westminster
S. Garcia, City of Broomfield
S. Surovchak, DOE-LM
J. Walstrom, CH2M Hill
Administrative Record



**FINAL INTERIM MEASURE/INTERIM
REMEDIAL ACTION FOR
THE ORIGINAL LANDFILL
(INCLUDING IHSS GROUP SW-2;
IHSS 115, ORIGINAL LANDFILL
AND IHSS 196, FILTER BACKWASH POND)**

February 2006
Minor Modification

LIST OF APPENDICES

Appendix A ARARs

Appendix B Post-Accelerated Action Monitoring and Long-Term Surveillance and Maintenance Considerations

Appendix C Environmental Data Summary Tables

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13.0 COMMENT RESPONSIVENESS SUMMARY

Responses to comments on this IM/IRA received during the formal public comment period, including comments from the regulatory agencies, will be documented in the Appendix H G.

POST-ACCELERATED ACTION MONITORING AND LONG-TERM SURVEILLANCE AND MONITORING CONSIDERATIONS

The objective of this section is to identify post-accelerated action monitoring and post-closure care requirements of the proposed accelerated action for the Original Landfill. These requirements are necessary for the long-term effectiveness of this remedy and include the following components: compliance with the Colorado Hazardous Waste Act (CHWA) post-closure requirements of 6 Colorado Code of Regulations (CCR) 1007-3, Part 265; information management; periodic review; and administrative jurisdiction. Other requirements necessary for the short- and long-term effectiveness of the remedy are identified in this Appendix, including institutional controls, inspection and maintenance, and environmental monitoring. These requirements are specific to the accelerated actions described in this IM/IRA and are summarized in Table 1. Additionally, these requirements will ultimately be captured (along with post-closure care requirements from other accelerated actions at Rocky Flats) in post-closure regulatory documents, which may include the final Corrective Action Decision/Record of Decision (CAD/ROD) for Rocky Flats, any post-closure Rocky Flats Cleanup Agreement (RFCA)-type agreement, and any post-closure Resource Conservation and Recovery Act (RCRA) permit (or other enforceable mechanism). DOE and CDPHE have not reached agreement as to whether a post-closure permit or, alternatively, an enforceable document as defined in 6 CCR 1007-3, Section 100.10(d) will be required for Rocky Flats, and if so, what requirements that permit or enforceable document will contain. The Parties will endeavor to resolve this matter. Failing an agreed-upon solution, each Party reserves its rights as provided in RFCA Part 18. Further, absent resolution of this matter consistent with the State Covenants Law, the CDPHE reserves the right to require a post-closure permit.

1.0 POST ACCELERATED ACTION CARE REQUIREMENTS

Post-closure controls, monitoring, and maintenance requirements for the cover described in this Appendix will be implemented at the Original Landfill. Some of these requirements are also the subject of an environmental covenant for the site if it is determined that Colorado's law applies to the federal government (see Section 25-15-320, C.R.S.).

The RFCA Parties have not reached agreement on the applicability of the statute to the federal government. Failing an agreed-upon resolution, each Party reserves its rights as provided in RFCA Part 18. 6 CCR 1007-3 Part 265.310(b) details the maintenance and monitoring requirements that must be implemented throughout the post-closure care period. The regulations establish 30 years as the default post-closure care period. However, the Colorado Department of Public Health and Environment (CDPHE) has the authority to increase or decrease this time period, as appropriate. The following requirements consistent with Part 265.310(b) will be imposed in the post-closure permit or other enforceable mechanisms implemented for the Original Landfill:

- Maintain the integrity and effectiveness of the final cover, including making repairs to the cover as necessary to correct the effects of settling, subsidence, erosion, or other events;

- Maintain and monitor the groundwater monitoring system and comply with all other appropriate groundwater monitoring requirements; and
- Prevent run-on and run-off from eroding or otherwise damaging the final cover.

Each of these three requirements is discussed further below.

1.1 Maintain Integrity and Effectiveness of the Final Cover

Current Sitewide security and access controls will be maintained until completion of the Rocky Flats Environment Technology Site (RFETS or Site) Closure Project. Additional institutional controls related to maintaining the integrity and effectiveness of the final cover are identified in the IM/IRA and summarized in Table 1.

Following construction of the cover and toe buttress, monitoring and maintenance activities will be performed quarterly. The cover and toe buttress will be inspected for signs of erosion, differential settling, subsidence, burrowing animals, weeds, and seepage areas. Signs of potential problems include, but are not limited to, deep rooting vegetation (trees), ponded water on the surface, and surface depressions.

Routine maintenance of the cover and toe buttress will include filling in and regrading any depressions, burrowing animal holes, or other disturbances. Where excessive erosion has occurred, soil will be replaced with similar cover soil and re-seeded. After restoration of the cover, the area prone to excessive erosion will be protected further with structural erosion controls such as erosion mats, silt fences, straw-bale sediment barriers, and straw-bale check dams. These controls will be installed and maintained as necessary to limit sediment transport.

Special attention will be provided on the slope of the landfill to monitor for any sloughing or movement. Monuments may be installed to monitor OLF movement.

Repairs and routine maintenance will be made to maintain the integrity and effectiveness of the cover, including the toe buttress. Inspection results, repairs, and routine maintenance will be documented in annual reports to the regulatory agencies which may be combined with future Sitewide maintenance and monitoring reports.

1.2 Maintain and Monitor the Groundwater Monitoring System

A groundwater monitoring system (6 CCR 1007-3, 265.90[d]) will be implemented after construction of the accelerated action is complete. A total of four (one upgradient and three downgradient) groundwater monitoring wells will be established for the Original Landfill pursuant to RFCA and RCRA as shown in Figure 1.0. The effects of the accelerated action including changes in surface water and groundwater flow may occur which could impact the groundwater quality. The constituents that will be monitored are volatile organic compounds (VOCs), metals (including uranium), mercury, and semi-volatile organic compounds (SVOCs). The purpose of this monitoring is to evaluate upgradient versus downgradient groundwater quality at the Original Landfill.

Groundwater sampling results will be evaluated in accordance with RFCA Attachment 5, Section 3.0.

Figure 1.0 Proposed Groundwater and Surface Water Monitoring at the Original Landfill

In addition, upstream and downstream surface water quality will be monitored at the Original Landfill. Upstream and downstream surface water monitoring sampling stations are located on Figure 1.0. The surface water at these locations will be monitored for VOCs and metals (including uranium) to evaluate upstream and downstream surface water quality in accordance with RFCA Attachment 5, Section 2.0.

1.3 Prevent Run-on and Run-off from Eroding or Damaging the Cover

Berms and swales will be designed to divert stormwater (flowing from the north) around the Original Landfill. The landfill will be graded to allow positive surface water drainage from the cover. Erosion of the cover and toe buttress from storm or wind events is extremely unlikely but will be monitored as part of the routine inspections of the cover. In addition, groundwater that is drained by the toe buttress drain will infiltrate into the existing groundwater system at the southern boundary of the OLF. This will prevent a build-up of water behind the toe buttress.

Following construction of the cover, inspection and maintenance activities of the run-on and run-off controls will be performed quarterly. Berms and swales will be visually inspected for signs of erosion and unwanted vegetation. Routine maintenance, as necessary, includes repairing areas with soil erosion blankets and reseeding.

Routine maintenance will be conducted to prevent run-on and run-off from eroding or damaging the cover and toe buttress. Inspection results, repairs, and routine maintenance will be documented in annual reports to the regulatory agencies which may be combined with future Sitewide maintenance and monitoring reports.

2.0 INFORMATION MANAGEMENT

A successful stewardship program is dependent on retaining the necessary records about the history and residual contamination of the site. Retained information should include the history of the site, environmental data, selected remedies, use of controls and their associated monitoring and maintenance records, and any other information judged necessary for succeeding generations to understand the nature and extent of the residual contamination. At a minimum, the following records will be retained, stored, and retrievable for this accelerated action:

- This IM/IRA and any future modifications;
- The final design for the regraded surface, soil cover, buttress fill and surface drainage, and field change requests;
- The as-built drawings of the accelerated action;
- The monitoring and maintenance manual and subsequent revisions;
- Inspection records and logbooks;
- Maintenance records and logbooks;
- Annual performance assessment reports;
- Analytical Data;
- CERCLA 5-year review reports;

Correspondence involving the regulatory agencies associated with modifications to the post-accelerated action care regime;

The Memorandum of Understanding (MOU) between DOE and the U.S. Department of Interior (DOI) (identifying the controlling authority);

The CAD/ROD; and

The RFETS HRR and other relevant historical documentation.

This information will be maintained in the Administrative Record (AR) File. Currently, the AR File is maintained onsite. DOE is currently looking at options for retention of permanent records following Site closure.

Table 1
Summary of OLF Post-Accelerated Action Monitoring, Maintenance, and Institutional Control Requirements

Area	Action	Frequency of Action	Criteria	Possible Follow-on Action
Cover	Visual Inspection	Quarterly	Differential Settling/Subsidence	Repair, as necessary.
			Erosion	Repair erosion areas with soil and rock, and reseed, as necessary.
			Unwanted Vegetation	Remove deep rooting trees or employ weed control measures, as necessary.
			Burrowing animals	Remove and repair damage, as necessary.
Berms and Swales	Visual Inspection	Quarterly	Erosion	Repair erosion areas with soil, erosion blankets and reseed, as necessary.
			Unwanted Vegetation	Remove deep rooting trees or employ weed control measures, as necessary.
Surface Water Sampling Stations	Sampling	Quarterly	Analyze for VOCs and metals (including uranium). Effluent limitations are the surface water standards. (RFCA Attachment 5, Table 1)	If a surface water standard is exceeded, sampling will increase to monthly for three consecutive months. If exceedances continue, the RFCA Parties will consult to determine whether a change in the remedy is required; additional parameters need to be analyzed; or if a different sampling frequency is required.
Groundwater	Sampling	Quarterly	Increasing trend in VOCs and metals (including uranium) in downgradient versus upgradient groundwater monitoring wells.	Statistically significant changes in downgradient versus upgradient groundwater quality will require consultation between the RFCA parties to determine if changes to the remedy are required.
Institutional and Physical Controls	Visual Inspection	Quarterly	Security and Access Controls; and overall site conditions	Check signs, fences (if required), markers, and overall condition of the OLF site to determine continuing effectiveness of institutional and physical controls.

3.0 PERIODIC ASSESSMENTS

Periodic assessments are performed to determine whether the selected accelerated actions and controls continue to operate as designed, and ascertain whether new technologies might exist to eliminate remaining residual contamination in a safe and cost-effective manner. The CERCLA 5-year review process is required for all Superfund sites that leave residual contamination behind after closure, and establishes the minimum requirements for post-closure periodic assessments. The EPA Comprehensive Five-Year Review Guidance (2001) describes the format of the review and suggests mechanisms that can be implemented through the 5-year review process to ensure the protectiveness of the remedy.

DOE is responsible for conducting the five-year reviews. EPA then issues a finding of concurrence or nonconcurrence. The public has indicated an interest in performing reviews more frequently than the 5-year interval specified in CERCLA. DOE intends to work with its stakeholders to arrive at a review regimen that meets community needs.

The periodic assessment will include actions such as evaluating monitoring and maintenance records, verifying regulatory compliance, and determining whether land use assumptions are still valid. Specific topics for the periodic assessment for the OLF are likely to include cover performance, landfill stability, surface water quality, and groundwater quality; as well as the need to continue monitoring.

4.0 CONTROLLING AUTHORITY

Long-term protection of human health and the environment necessitates that a controlling authority be established with responsibility for post-closure management. CERCLA mandates that DOE, as a responsible party, will retain responsibility for the contamination at RFETS resulting from its activities there, as well as responsibility for long-term maintenance of any remedies. The Rocky Flats National Wildlife Refuge Act of 2001 requires that, following certification by EPA that the cleanup and closure of Rocky Flats has been completed, certain lands of the current Site will be transferred from the Secretary of Energy to the Secretary of the Interior. These lands will be under administrative jurisdiction of the USFWS. The Act also requires the Secretary of Energy to retain administrative jurisdiction over Site lands required to carry out response actions required for the cleanup and closure of the Site. The MOU currently being negotiated between DOE and DOI will outline this process, although it is unlikely the final boundaries of the land to be transferred will be determined until the final cleanup and closure plans are approved. However, the OLF will remain under the administrative jurisdiction of the Secretary of Energy.

5.0 REPORTING REQUIREMENTS

Annual reporting of data results, inspection results, repairs, and routine maintenance will be required. These requirements may be combined into one report and/or with future Sitewide maintenance and monitoring reports.